

Feature

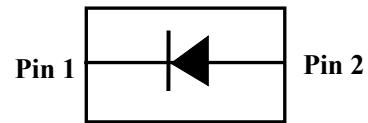
- Ultra Small mold type. (SOD-123FL)
- Low V_F
- High reliability.


SOD-123FL (Top View)
Construction

- Silicon epitaxial planar

Mechanical Characteristics

- Lead finish:100% matte Sn(Tin)
- Mounting position: Any
- Qualified max reflow temperature:260°C
- Device meets MSL 1 requirements
- Pure tin plating: 7 ~ 17 um


Circuit Diagram

Marking (Top View)
Electrical characteristics per line@25°C

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V_F	-	0.31	0.35	V	$I_F=1A$
Forward voltage	V_F	-	0.35	0.38	V	$I_F=2A$
Reverse current	I_R	-	90	500	μA	$V_R=40V$

Absolute maximum rating@25°C

Parameter	Symbol	limits	Unit
Reverse voltage (DC)	V_{RM}	40	V
Average rectified forward current	I_o	2	A
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	50	A
Typical Thermal Resistance ¹⁾	$R_{\theta JA}$	70	°C/W
Operating Junction temperature Range	T_j	-55 to 125	°C
Storage temperature	T_{stg}	-40 to +125	°C

NOTE:1. Thermal resistance from junction to ambient at 0.375" (9.5 mm) lead length, P.C.B. mounted

Typical Characteristics

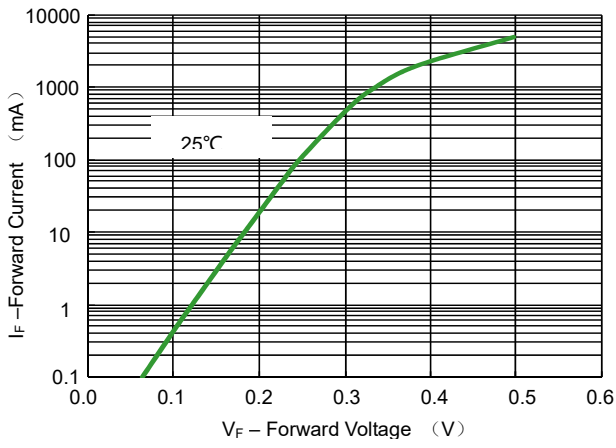


Fig 1. Forward Voltage

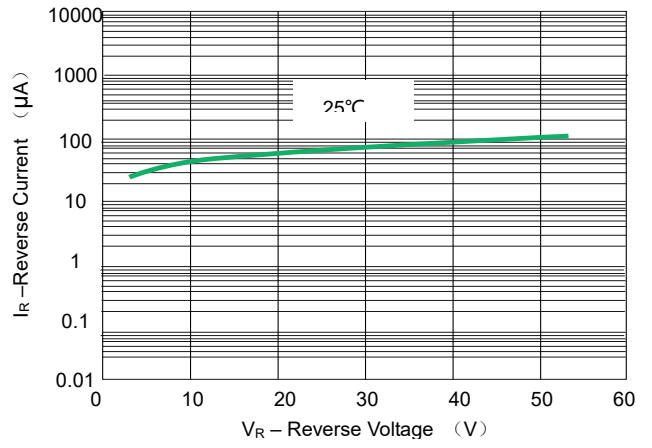


Fig 2. Leakage Current

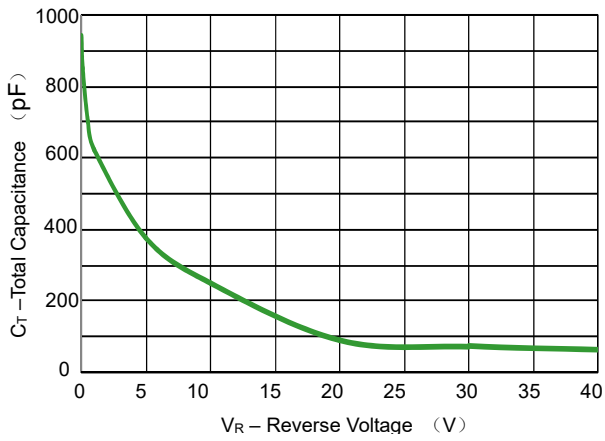
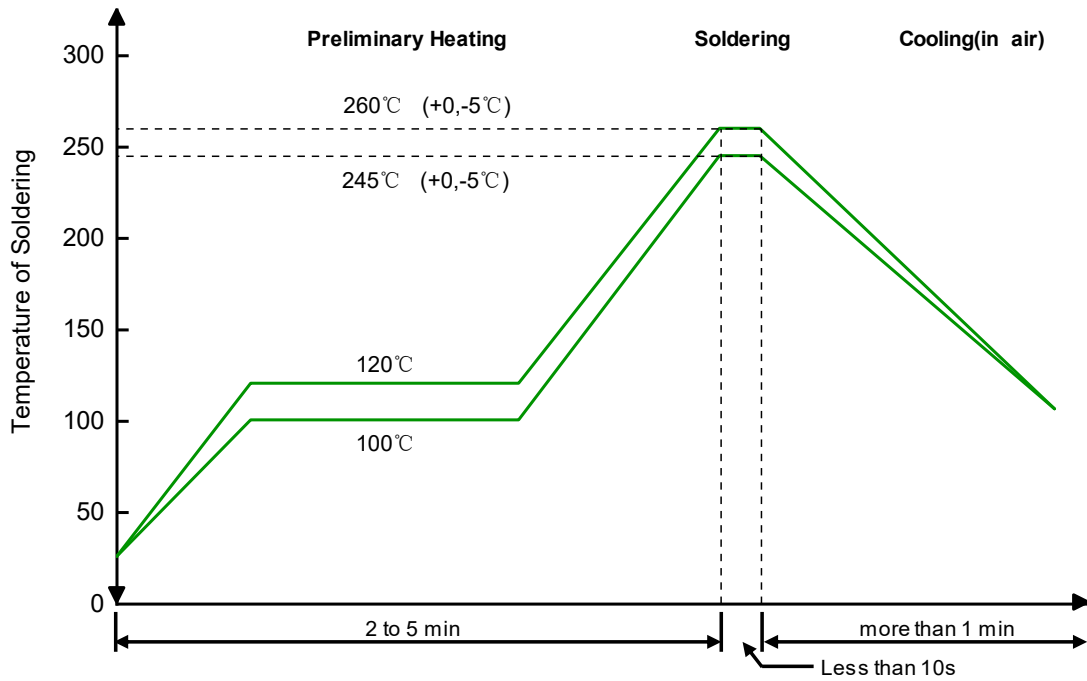


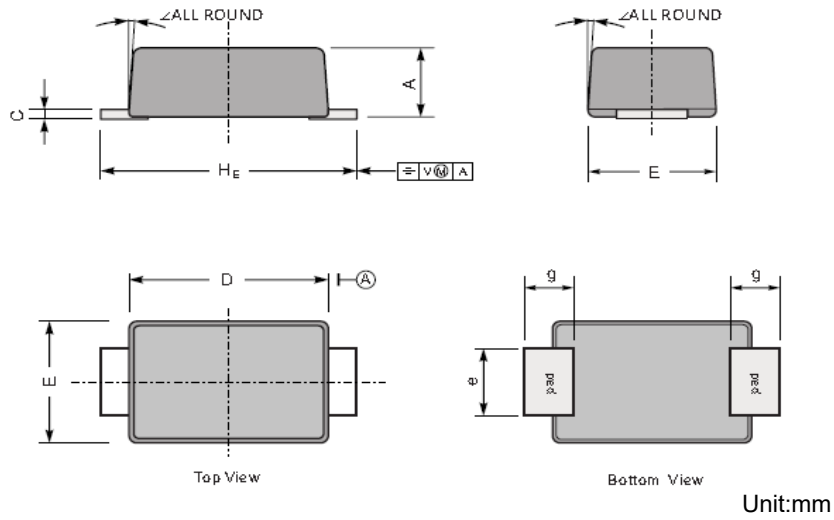
Fig 3. Total Capacitance

Solder Reflow Recommendation



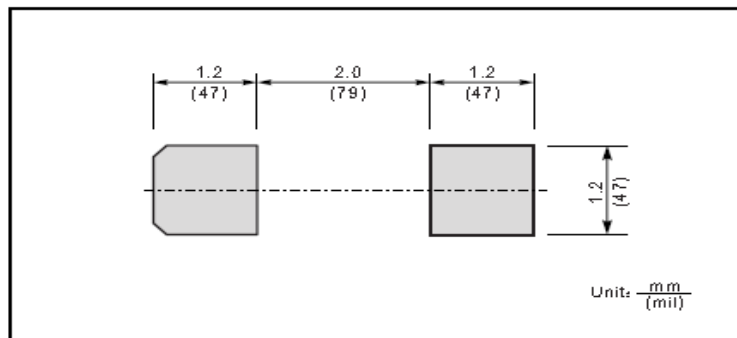
Remark: Pb free for 260°C; Pb for 245°C.

Product dimension (SOD-123FL)



UNIT		A	C	D	E	e	g	H _E	∠
mm	max	1.1	0.20	2.9	1.9	1.1	0.9	3.8	7°
	min	0.9	0.12	2.6	1.7	0.8	0.7	3.5	
mil	max	43	7.9	114	75	43	35	150	
	min	35	4.7	102	67	31	28	138	


The recommended mounting pad size



Ordering information

Device	Package	Reel	Shipping
PSBD1DF40V2L	SOD-123FL (Pb-Free)	7"	3000 / Tape & Reel


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